

What is claimed is:

1. A resin composition for a mold used in forming micropatterns, which comprises:
 - 5 (A) 40 to 90 parts by weight of an active energy curable urethane-based oligomer having a reactive group selected from the group consisting of (meth)acrylate, vinyl ether, aryl ether, and a combination thereof;
 - 10 (B) 10 to 60 parts by weight of a monomer reactive with the urethane-based oligomer, having a reactive group selected from the group consisting of (meth)acrylate, vinyl ether, aryl ether, and a combination thereof;
 - 15 (C) 0.01 to 200 parts by weight of a silicone or fluorine containing compound, based on 100 parts of the sum of the components (A) and (B); and
 - (D) 0.1 to 10 parts by weight of a photoinitiator, based on 100 parts of the sum of the components (A), (B) and (C).
2. The composition according to claim 1, wherein the active energy curable urethane-based oligomer is selected from the group consisting of linear aliphatic, cycloaliphatic and aromatic urethane-based oligomers having at least two reactive groups, and a mixture thereof.
- 25 3. The composition according to claim 1, which further comprises at least one reactive oligomer selected from the group consisting of a (meth)acrylated polyester, (meth)acrylated polyether, (meth)acrylated epoxy, (meth)acrylated polycarbonate, (meth)acrylated polybutadiene, and a mixture thereof, as a substituent of Component A.
- 30 4. The composition according to claim 1, wherein the (meth)acrylate used as

Component B is selected from the group consisting of isobornyl acrylate, 1,6-hexanediol acrylate, triethyleneglycol di(meth)acrylate, trimethylol propane triacrylate, tetraethyleneglycol di(meth)acrylate, 1,3-butanediol diacrylate, 1,4-butanediol diacrylate, diethyleneglycol diacrylate, neopentylglycol diacrylate, 5 neopentylglycol di(meth)acrylate, polyethyleneglycol di(meth)acrylate, pentaerythritol triacrylate, dipentaerythritol (hydroxy) pentaacrylate, alkoxyLATED tetraacrylate, octadecyl acrylate, isodecyl acrylate, lauryl acrylate, stearyl acrylate, behenyl acrylate, styrenic monomer, and a mixture thereof.

10 5. The composition according to claim 1, wherein the vinyl ether used as Component B is selected from the group consisting of cyclohexyl vinyl ether, 2-ethylhexyl vinyl ether, dodecyl vinyl ether, 1,4-butanediol divinyl ether, 1,4-hexanediol divinyl ether, diethylene glycol divinyl ether, ethyleneglycol butyl vinyl ether, ethyleneglycol divinyl ether, triethyleneglycol methylvinyl ether, 15 triethyleneglycol divinyl ether, trimethylol propane trivinyl ether, 1,4-cyclohexane dimethanol divinyl ether, and a mixture thereof.

20 6. The composition according to claim 1, wherein the aryl ether used as Component B is selected from the group consisting of aryl propyl ether, aryl butyl ether, pentaerythritol triary ether, and a mixture thereof.

7. The composition according to claim 1, wherein the silicone or fluorine-containing compound is at least one selected from:

25 (i) a silicone-containing reactive compound selected from the group consisting of a silicone-containing vinyl derivative, silicone-containing (meth)acrylate, (meth)acryloxy-containing organosiloxane, silicone polyacrylate, and a mixture thereof;

(ii) a fluorine-containing reactive compound selected from the group 30 consisting of a fluoroalkyl-containing vinyl derivative, fluoroalkyl-containing (meth)acrylate, fluorine polyacrylate, and a mixture

thereof;

- (iii) a silicone or fluorine containing resin, or a mixture thereof; and
- (iv) a silicone or fluorine containing surfactant or oil, or a mixture thereof.

5 8. The composition according to claim 1, wherein the photoinitiator is at least one of a free radical initiator selected from the group consisting of benzyl ketals, benzoin ethers, acetophenone derivatives, ketoxime ethers, benzophenone, benzo and thioxantone compounds, and mixtures thereof, and a cationic initiator selected from the group consisting of onium salts, ferrocenium salts, diazonium salts, and mixtures thereof.

10 9. A method for fabricating an organic mold, which comprises coating or casting the resin composition recited in claim 1 on a pattern face of a mastermold, placing a support on the resin layer, irradiating the resulting laminate with an active energy ray to preliminarily cure the resin composition, lifting off the organic mold having a reverse pattern face to that of the mastermold and integrally formed with the support from the mastermold, and completely curing the organic mold.

15 10. The method according to claim 9, which further comprises adhering a soft or rigid backing having a curved or flat face to the bottom face of the organic mold.

20 11. A method for fabricating an organic mold, which comprises coating or casting a resin composition recited in claim 1 on a pattern face of a mastermold, irradiating the resin layer with an active energy ray to preliminarily cure it, pouring a UV- or heat-curable resin composition onto the cured resin layer as a backbone, heating or irradiating the resultant to completely cure the resin and the backbone layers, lifting off the organic mold having a reverse pattern face to that of the mastermold and integrally formed with the backbone layer from the mastermold, and completely curing the organic mold.